

- 15 -

## CLAIMS

What is claimed is:

1. A method of treating a cognitive disorder in a subject, said method comprising:  
administering an effective amount of a first compound comprising a phenserine  
compound to a subject; and  
administering an effective amount of a second compound comprising memantine  
to the subject, thereby treating a cognitive disorder in said subject.
2. The method according to claim 1, wherein said effective amount of the second  
compound is between about 10 mg and about 20 mg per day and said effective  
amount of the first compound is between about 10 mg and about 60 mg per day.
3. The method according to claim 2, wherein said effective amount of second  
compound is about 10 mg/day.
4. The method according to claim 2, wherein said first compound is phenserine and  
said effective amount of first compound is about 15 mg twice a day.
5. The method according to claim 4, wherein said effective amount of second  
compound is about 10 mg/day twice a day.
6. The method according to claim 1, wherein said first compound is (+)-phenserine  
and said effective amount of first compound is between about 5 mg and about 100  
mg.
7. The method according to claim 1, wherein the first compound comprises both (+)-  
phenserine and phenserine.
8. The method according to claim 7, wherein the first compound comprises (+)-  
phenserine tartrate and phenserine tartrate.

- 16 -

9. The method according to claim 1, wherein said cognitive disorder is selected from the group consisting of Alzheimer's disease, vascular dementia, Parkinson's disease, and combinations of any thereof.
10. The method according to claim 9, wherein said cognitive disorder is Alzheimer's disease.
11. The method according to claim 1, wherein administering said effective amount of said first compound and said effective amount of second compound comprises administering a pharmaceutically acceptable composition comprising phenserine and memantine.
12. A method for reducing neurotoxicity of beta-amyloid protein in a subject receiving memantine comprising administering a phenserine compound to the subject.
13. The method according to claim 12, wherein the phenserine compound is phenserine.
14. The method according to claim 12, wherein the phenserine compound is (+)-phenserine.
15. The method according to claim 12, wherein the phenserine compound comprises a tartrate salt.
16. A composition comprising an effective amount of a first compound comprising a phenserine compound and an effective amount of a second compound comprising memantine, wherein said composition is useful in the treatment of a cognitive disorder.
17. The composition of claim 16, comprising one or more pharmaceutically-acceptable diluents, excipients, or carriers.

- 17 -

18. The composition of claim 17, wherein said effective amount of the first compound is 15 mg.
19. The composition of claim 17, wherein said effective amount of the second compound is 10 mg.
20. The composition of claim 16, wherein said effective amount of the second compound is between about 5 mg and about 20 mg.
21. The composition of claim 16, wherein said effective amount of the first compound is between about 10 mg and about 60 mg.
22. The composition of claim 16, wherein said effective amount of the second compound is between about 10 mg and about 20 mg and said effective amount of the first compound is between about 1 mg and about 30 mg.
23. The composition of claim 17, wherein said cognitive disorder is Alzheimer's disease.
24. The composition of claim 16, wherein the first compound comprises a tartrate salt of a phenserine compound.
25. The composition of claim 16, wherein the second compound comprises a pharmaceutically acceptable salt of memantine.
26. Use of the composition of any one of claims 16 to 25 for the treatment of beta-amyloid protein induced neurotoxicity.
27. Use of a phenserine compound and memantine for the manufacture of a medicament for the treatment of a cognitive disorder.
28. Use of claim 27, wherein said phenserine compound is phenserine between about 10 mg and about 40 mg and said memantine is between about 10 mg and about 20 mg.

- 18 -

29. Use of claim 27, wherein said memantine is about 10 mg/day.
30. Use of claim 27, wherein said phenserine is about 15 mg.
31. Use of claim 27, wherein said phenserine compound is (+)-phenserine.
32. Use of claim 27, wherein the phenserine compound comprises (+)-phenserine and phenserine.
33. Use of claim 32, wherein the first compound comprises (+)-phenserine tartrate and phenserine tartrate.
34. Use of claim 27, wherein said cognitive disorder is selected from the group consisting of Alzheimer's disease, vascular dementia, Parkinson's disease, and combinations of any thereof.
35. Use of claim 34, wherein said cognitive disorder is Alzheimer's disease.
36. Use of a phenserine compound for the manufacture of a medicament for reduction of beta-amyloid toxicity in a patient taking memantine.
37. Use of claim 36, wherein the phenserine compound is phenserine.
38. Use of claim 36, wherein the phenserine compound is (+)-phenserine.
39. Use of any one of claims 27-38 for delaying onset or progression of beta-amyloid induced neurotoxicity.
40. Use of a phenserine compound and memantine for the treatment of a cognitive disorder.